

WFO Jackson, Mississippi

MONTHLY REPORT OF HYDROLOGIC CONDITIONS

REPORT FOR:

MONTH

YEAR

August

2012

TO: Hydrometeorological Information Center, W/OH2
NOAA / National Weather Service
1325 East West Highway, Room 7230
Silver Spring, MD 20910-3283

SIGNATURE

Alan E. Gerard, Meteorologist In-Charge

DATE

10/03/2012

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

☐

An X inside this box indicates that no river flooding occurred within this hydrologic service area.

Synopsis...

The month of August will be remembered for Hurricane Isaac. Temperatures for the month were actually near or just below normal across the Hydrologic Service Area (HSA). Temperatures ranged from 1.2 degrees below normal at Greenwood to 0.1 degrees above normal at Hattiesburg. Rainfall was much above normal across a vast portion of the HSA thanks to Isaac. The summer of 2012 had temperatures range from 2 to 3 degrees above normal which is less than the previous 2 years. Rainfall totals for the summer were above normal across much of the area.

The month began with a frontal system across Southeast Arkansas and northern portions of the HSA. Only a few isolated to scattered showers were noted in the north. The front pulled back to the north on the 2nd. Hot and humid conditions remained across the area through the 5th. Scattered showers occurred mainly across Mississippi.

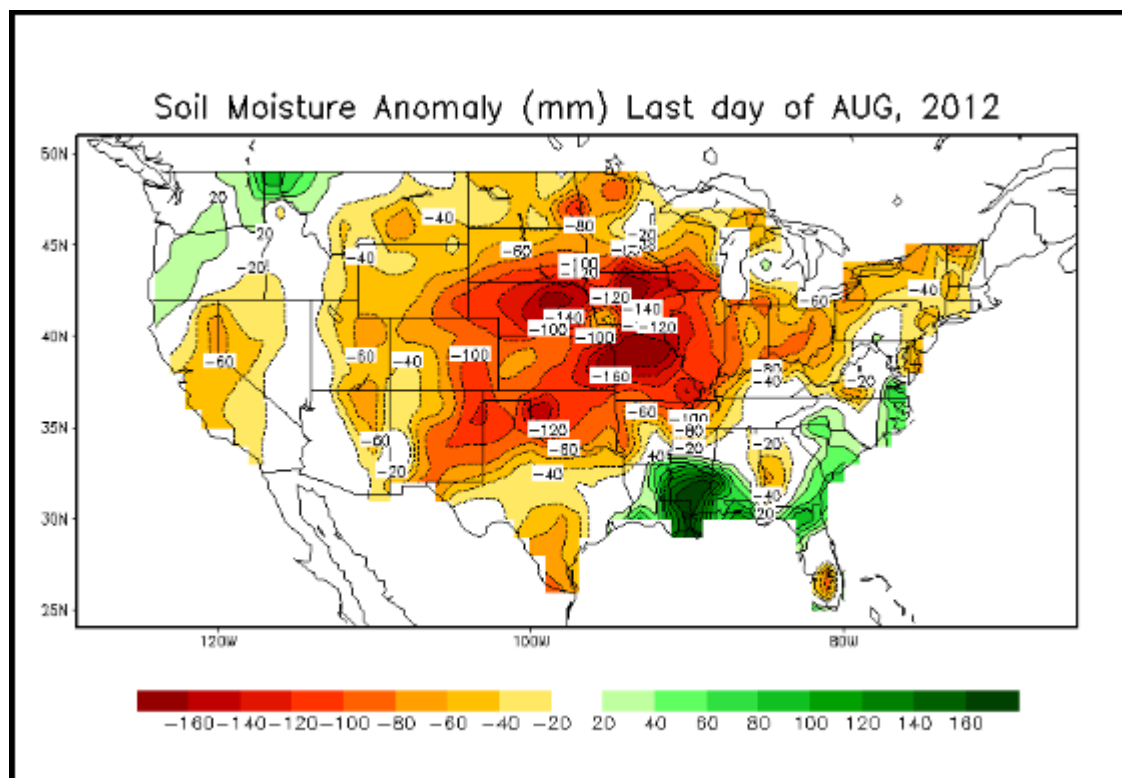
Another front stalled just to the north of the HSA while a weak low pressure trough was located along the Louisiana Coast on the 6th. There was enough instability induced by these features to produce scattered to widespread thunderstorms. Damaging winds were reported across South Mississippi, Central Mississippi, and Catahoula Parish Louisiana. Warm humid conditions and return flow from the Gulf of Mexico produced isolated to scattered showers and thunderstorm through the 9th. Some damaging winds were reported from the 8th into 9th across Northeast Louisiana, Southeast Arkansas, and South Mississippi. A cold front pushed across the HSA on the 10th and moved to the Mississippi Coast by the morning of the 12th. Scattered rainfall from 1.00 to 3.00 inches was reported with this frontal passage. The front brought some cooler and drier air to the region.

The week of the 13th opened with return flow from the Gulf just ahead of a cold front moving through Central Arkansas. The front pushed into South Central Mississippi and Northeast Louisiana on the 14th and 15th. Scattered moderate to heavy rainfall was reported in northern portions of the HSA. Rainfall totals from 1.50 to 4.00 inches were reported in Sunflower and Leflore counties. On the 16th, the front lifted northward into North

Mississippi before dissipating. Yet another cold front pushed into Southeast Arkansas and North Mississippi on the 18th before once again moving back to the north on the 19th. Scattered showers and thunderstorms from the 16th to 19th brought 0.50 to 3.00 inches to the region. From late on the 19th and through the 20th, a cold front moved across the area bringing slightly cooler and less humid air to the HSA. Scattered rainfall from 0.50 to 2.00 inches was reported with the frontal passage. High pressure built into the area from the 20th to the 23rd. Return flow from the Gulf from the 24th to the 27th produced scattered showers across the area. By the morning of the 27th, Tropical Storm Isaac entered the Southeast Gulf of Mexico. Some outer rain bands moved into southeastern Mississippi during the day on the 28th. By the evening of the 28th, Isaac was upgraded to a hurricane before making landfall between Buras and Port Fourchon. The storm moved to Morgan City by the 29th and to Alexandria by the 30th. Late on the 30th, the center of Isaac crossed the border into South Arkansas. Feeder bands continued to affect Mississippi during the day on the 31st. Rainfall totals from 8.00 to 15.00 inches were reported across South Mississippi and Southeast Mississippi while 5.00 to 8.00 inches were reported across Southwest, Central, and East Central Mississippi. Rainfall amounts from 4.00 to 6.00 inches were reported from Vicksburg to Greenville as well. Flash flooding was the main issue across South, Southeast, and East Central Mississippi as heavy rainfall bands repeatedly moved across these areas. Significant River flooding occurred along Black Creek in southern Forrest County where 11.00 to 14.00 inches of rainfall fell.

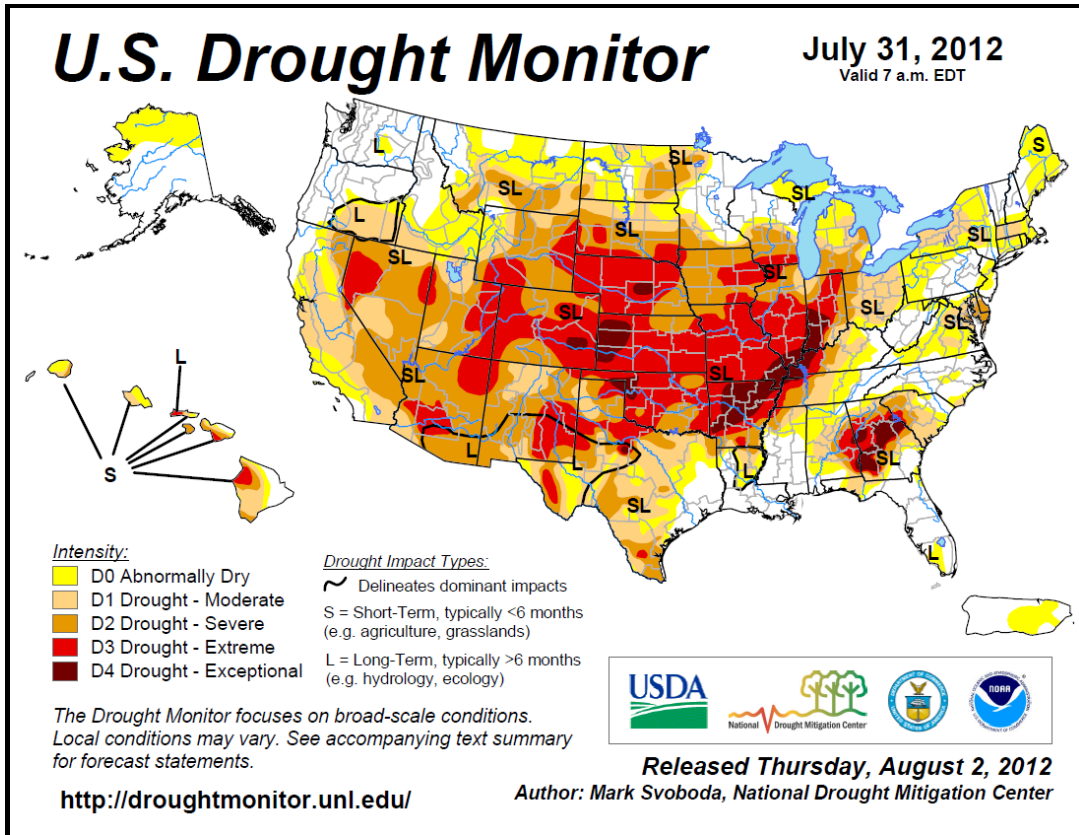
River and Soil Conditions...

Soil Moisture:

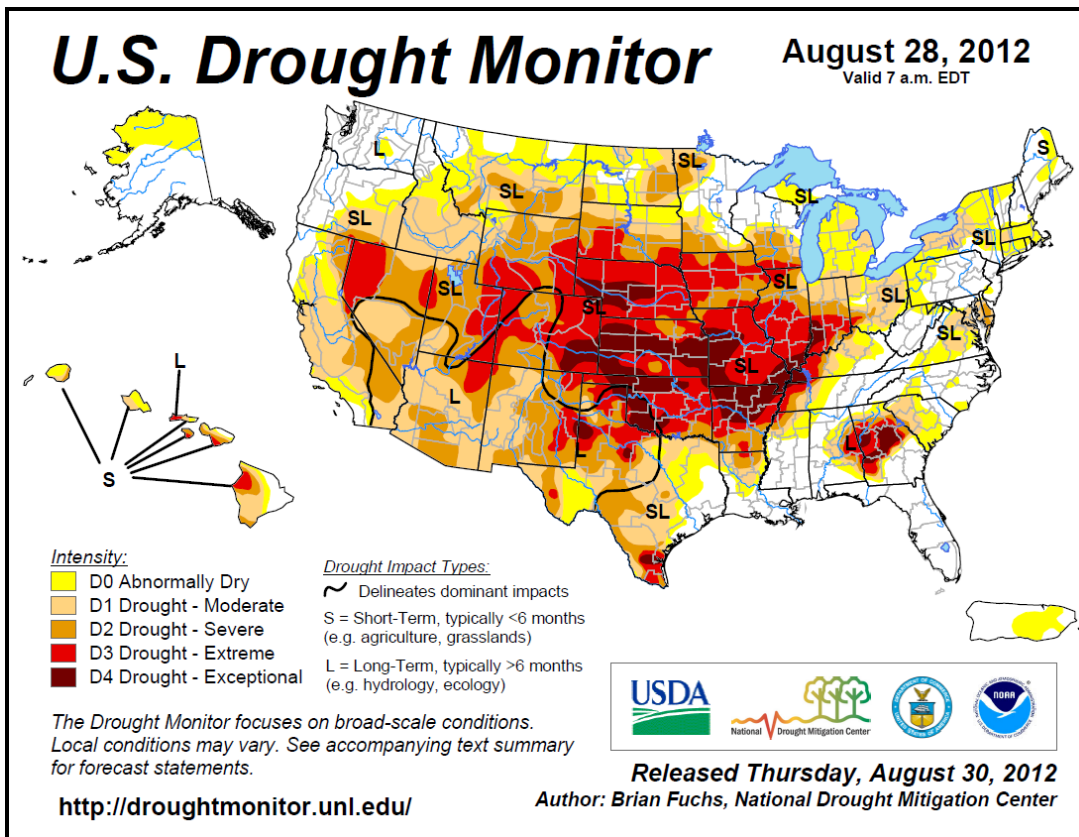


August 2012

Drought Comparison to prior month:



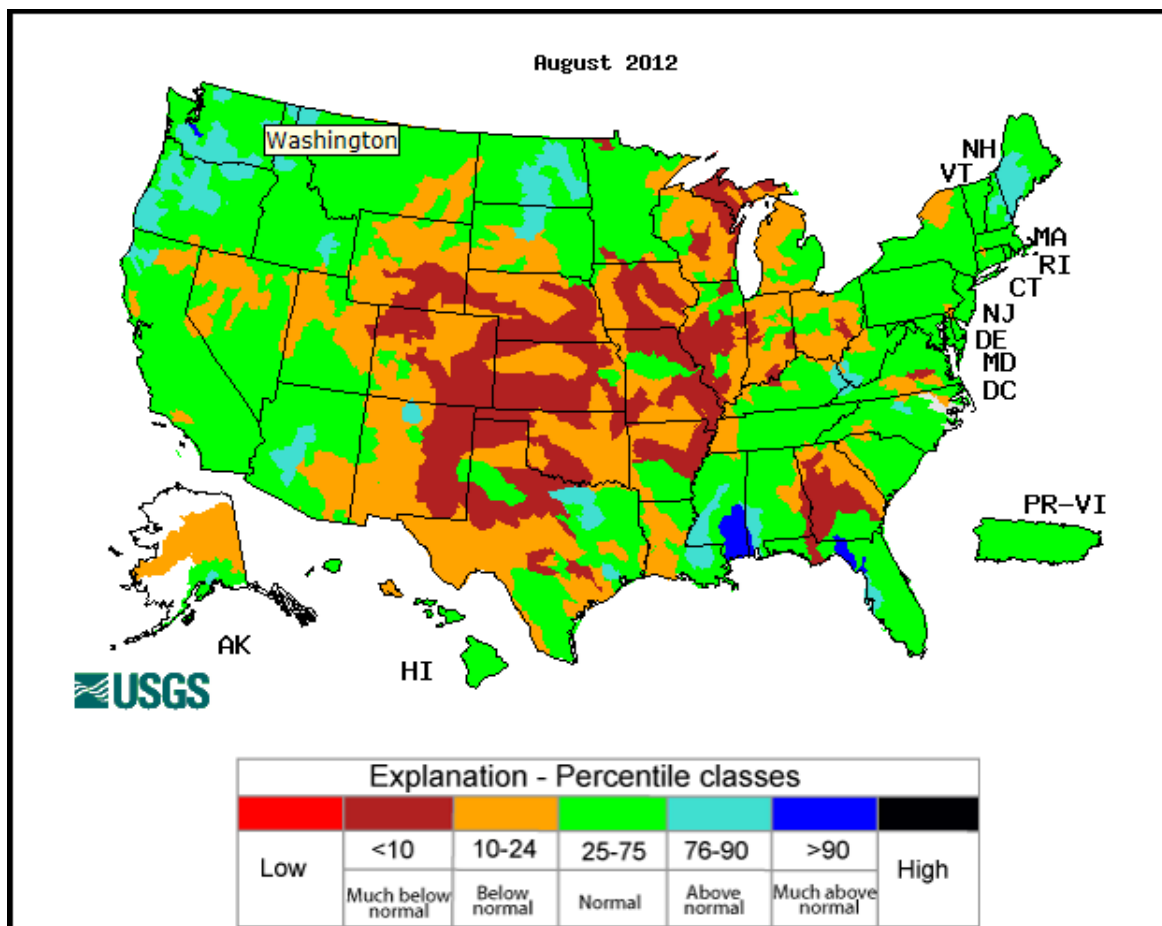
July 31, 2012



August 28, 2012

Streamflow:

The United States Geological Survey's (USGS) August 2012 river streamflow records were compared with all historical August streamflow records. Streamflow was above normal across the Homochitto and Big Black River Systems while streamflow was much above normal across the Pascagoula River System. All other river systems had normal streamflow.



August Streamflow

Significant flash flooding occurred across South Mississippi with Hurricane Isaac. The most significant river flooding occurred along Black Creek in Southeast Mississippi where 11.00 to 14.00 inches of Hurricane Isaac rainfall fell. The Black Creek at Brooklyn recorded its second highest crest since records have been kept. (This event was classified as a 4 percent return event.) Many homes and camps along the creek were flooded or had their access cut off. Minor flooding also occurred along the Bouie Creek in Southeast Mississippi and the Lower Pearl River in Central and South Mississippi.

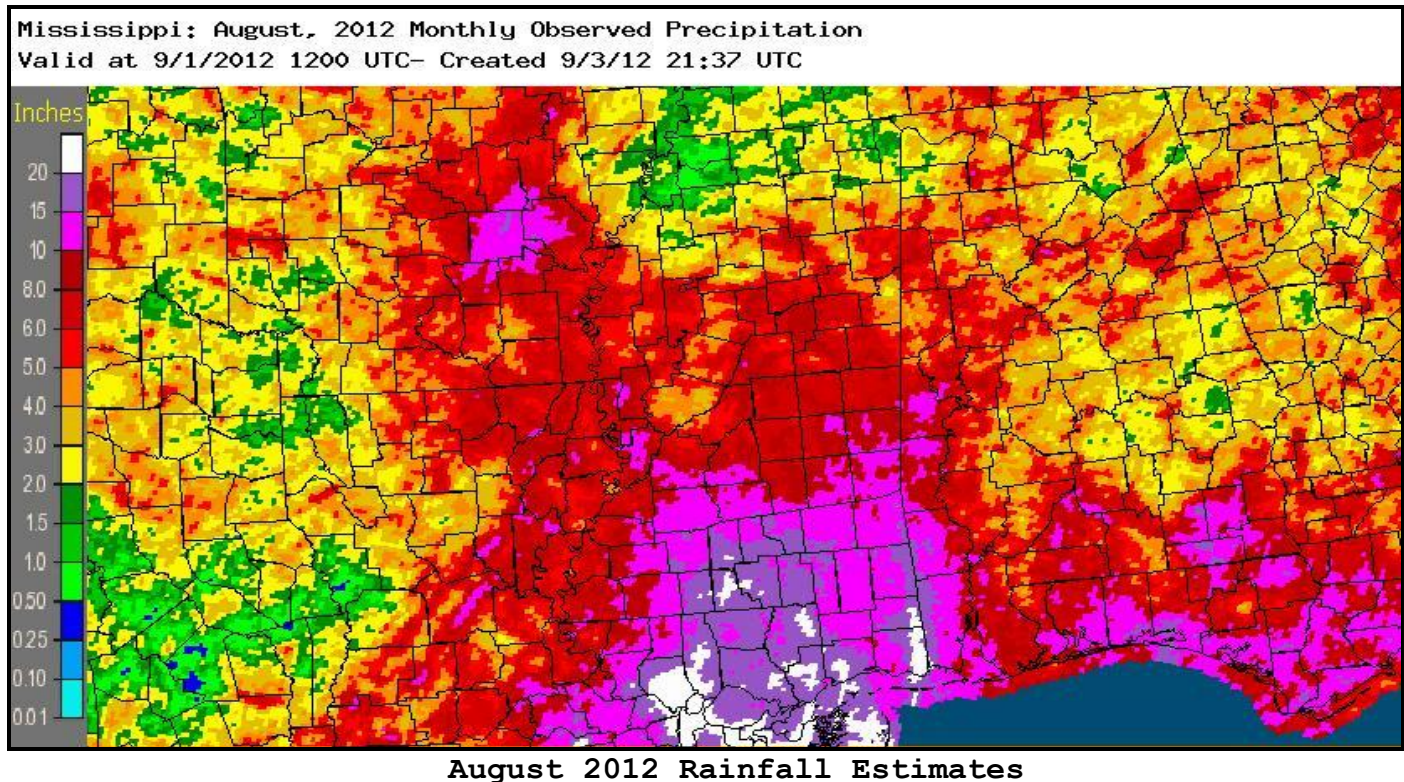
Stages along the Mississippi River continued to remain well below normal levels. The low water continued to pose navigational issues along the river.

Temperatures have equal chances of being below or above normal across the HSA over the next 3 months while rainfall is expected to be above normal. Based on current soil moisture, streamflow, and the 3 month weather outlooks, flood potentials are as follows:

<i>Pearl River System:</i>	Average to above average.
<i>Yazoo River System:</i>	Average.
<i>Big Black River System:</i>	Average.
<i>Homochitto River System:</i>	Above average.
<i>Pascagoula River System:</i>	Above average.
<i>Northeast LA and Southeast AR:</i>	Below average to average.
<i>Tombigbee River System:</i>	Below average.
<i>Mississippi River:</i>	Below average.

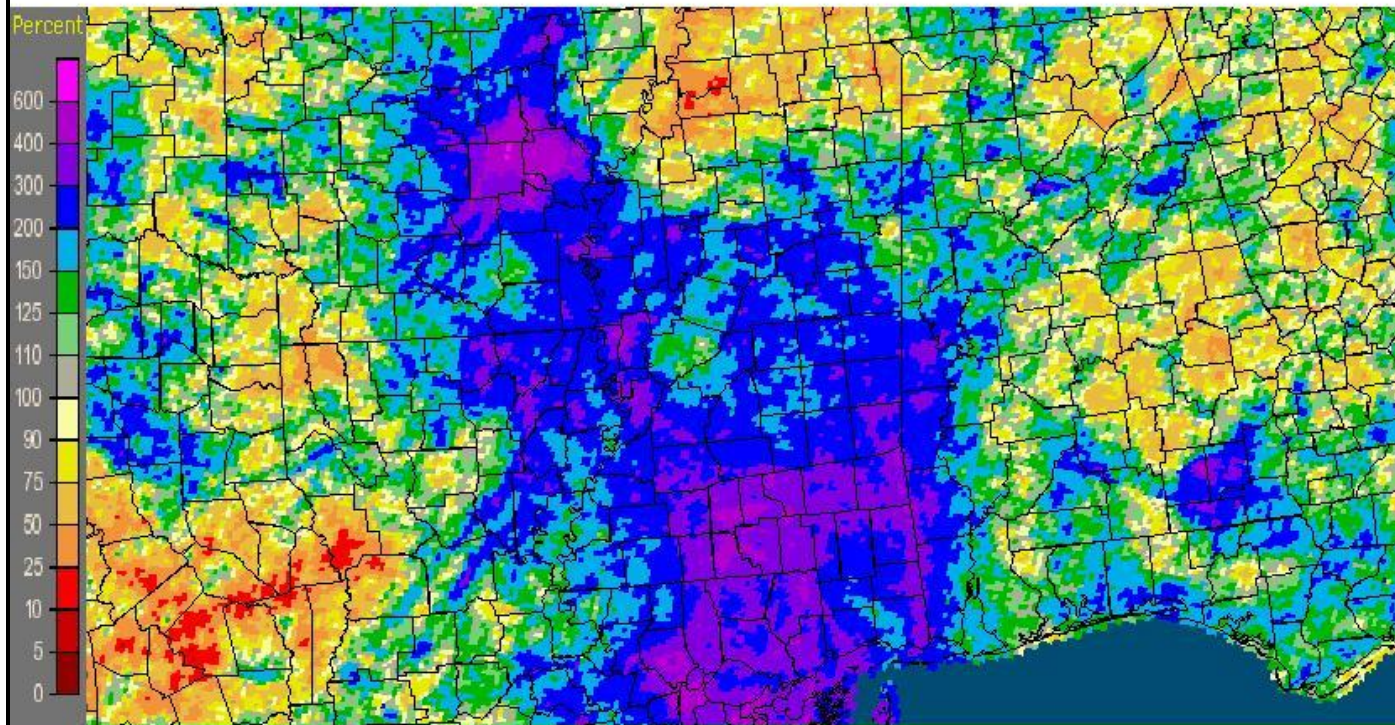
Rainfall for the month of August:

The largest rainfall amounts in the HSA from NWS Cooperative Observer reports during the period from 7 am on July 31st until 7 am on August 31st were: 20.25 inches at Sumrall, MS; 19.82 inches at Purvis, MS; 17.64 inches at Monticello, MS; 17.38 inches at Hattiesburg, MS; 14.90 inches at Pat Harrison Waterway's Dry Creek Water Park, MS; 14.46 inches at Laurel, MS; 14.39 inches at Collins, MS; 14.30 inches at Pat Harrison Waterway's Big Creek Water Park, MS; 14.28 inches at Shubuta, MS; 13.24 inches at Columbia, MS; Topton, MS; and 13.13 inches at Pat Harrison Waterway's Dunn's Falls Water Park, MS.



Mississippi: August, 2012 Monthly Percent of Normal Precipitation

Valid at 9/1/2012 1200 UTC- Created 9/3/12 21:41 UTC



August 2012 Percent of Normal Rainfall Estimates

Note: Observer rainfall and MPE may differ due to time differences.

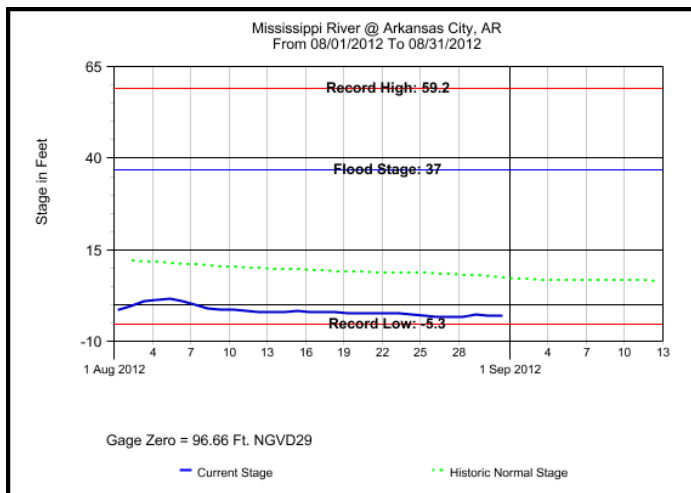
August rainfall for Selected Cities...

City (Airport)	August Rainfall	Departure from normal	2012 Rainfall	2012 Departure from Normal
Jackson, MS	8.95	+4.71	52.71	+15.43
Meridian, MS	8.35	+4.36	45.72	+6.76
Greenwood, MS	4.14	+1.31	27.39	-6.68
Greenville, MS	4.75	+2.29	27.07	-7.49
Hattiesburg, MS	14.68	+9.95	53.36	+11.20
Vicksburg, MS	6.92	+3.27	39.10	+2.53

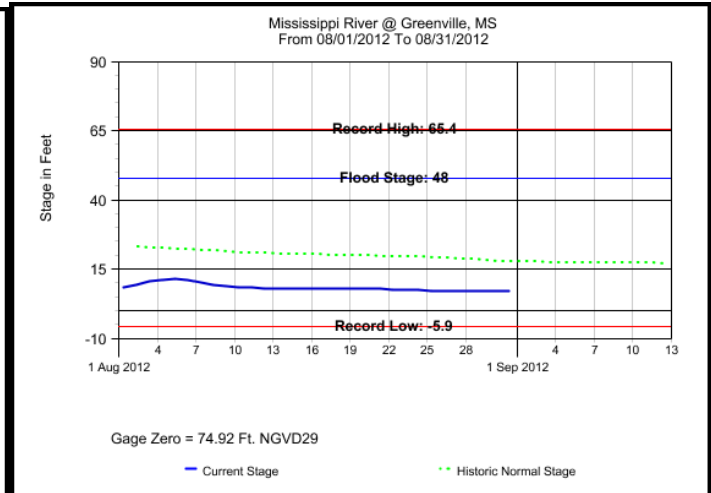
Mississippi River...

Mississippi River Plots for August, 2012

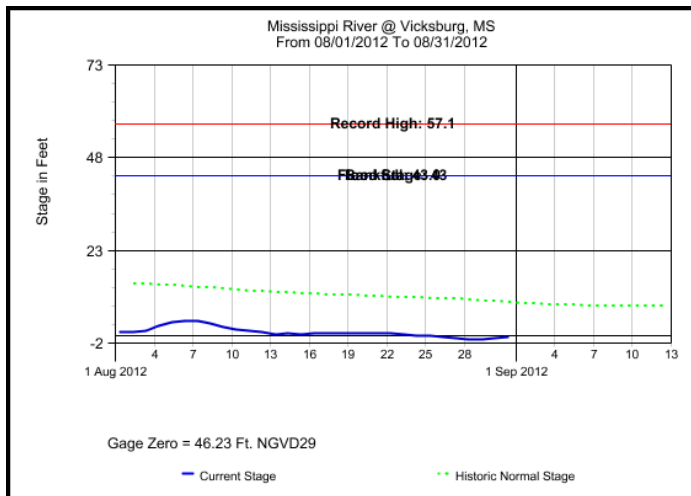
Plots Courtesy of the United States Army Corps of Engineers



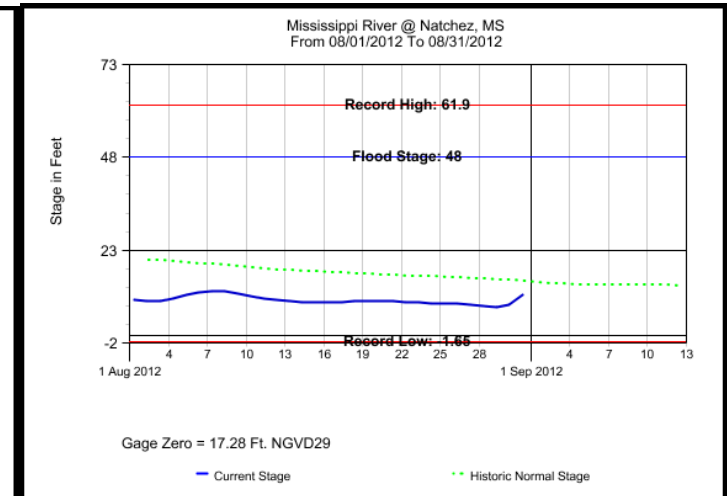
ARKANSAS CITY, AR



GREENVILLE, MS



VICKSBURG, MS



NATCHEZ, MS

Preliminary high and low stages for the month:

Location	FS	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City, AR	37	1.66	08/05/12	-3.32	08/26/12
Greenville, MS	48	11.48	08/05/12	6.90	08/27/12
Vicksburg, MS	43	4.23	08/06/12	1.07	08/29/12
Natchez, MS	48	11.98	08/07/12	7.66	08/29 /12

Total Flood Warning products issued: 11
Total Flood Statement products issued: 28
Total Flood Advisories MS River : 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

Marty V. Pope

Service Hydrologist &
Latrice Maxie

Assistant Hydrologist/Observing Program Leader (OPL)

Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District